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## **LSA's 10 Year Featured Issue on Optics and Photonics Research in Korea: Collaboration between Academia and Industry**

*Submission deadline: 31 August, 2022*

### **Brief introduction of the special issue:**

During the past decade, there has been an explosion in the development of novel micro-/nano-scale optical physics, materials, devices, characterization techniques in optics and photonics research. While we are observing such fundamentals have been realized, science-to-technology transition for real-world applications is essential for the future of micro-/nano-scale optics and photonics.

This special issue aims to focus on the collaboration research between academia and industry in Korea which leads the science-to-technology transition for real-world applications. It will highlight the most distinguished research works, perspectives and reviews from all aspects of optics and photonics, including basic science, applied research and applications.

This special issue is edited by Prof. Junsuk Rho from Pohang University of Science and Technology (POSTECH) and Dr. Duheon Song from Samsung Advanced Institute of Technology (SAIT), Samsung Electronics and Dr. Seongjin Park from the Industry-Academy-Research Cooperation Office, POSCO.

### **Guest editors:**

#### **Prof. Junsuk Rho (POSTECH)**



Junsuk Rho (鲁俊锡) is currently a *Mu-Eun-Jae* (无垠斋) endowed Chair Professor and Young Distinguished Professor in the Department of Mechanical Engineering and the Department of Chemical Engineering at Pohang University of Science and Technology (POSTECH), Korea. Before joining POSTECH, he received a degree his B.S. (2007) and M.S. (2008) in Mechanical Engineering at Seoul National University, Korea and the University of Illinois, Urbana-Champaign, respectively. After getting Ph.D. (2013) in Mechanical Engineering and Nanoscale Science & Engineering from the University of California Berkeley, he had worked as a postdoctoral fellow in Materials Sciences Division at Lawrence Berkeley National Laboratory and *Ugo Fano* Fellow in Nanoscience and Technology Division at Argonne National Laboratory. His research is focused on developing novel nanophotonic materials and devices

based on fundamental physics and experimental studies of deep sub-wavelength light-matter interaction. Dr. Rho has published approximately 200 high impact peer-reviewed journal papers including Nature, Science, Nature Materials, Nature Nanotechnology, Nature Photonics and Nature Communications. He also has presented keynote and invited talks more than 350 times at the world-leading institutes and international conferences/workshops as well as having 6 US patent and 44 Korea patents. He has received honorable awards including the US DOE Argonne Named Fellowship (2013-2016), Edmund Optics Educational Award (2015), the OSK Young Investigator Award (2016), SPIE Rising Researcher Award (2017), Korean MSIP Minister's Commendation (2017), Korean MSIT Minister's Commendation (2019), OSA IMCO Young Scientist Award (2019), Korean Presidential Early Career Award for Scientists and Engineers (2019), Springer-Nature MINE Young Scientist Award (2020), Elsevier MNE Young Investigator Award and Lectureship (2020), MDPI Micromachines Young Investigator Award (2020), OSK Haerim (海林) Photonics Award (2021).

### **Dr. Duheon Song (Samsung Advanced Institute of Technology, Samsung Electronics)**



Dr. Duheon Song received B.S., M.S., and Ph.D. in Electronics Engineering from Seoul National University in Korea. Before joining Samsung, he worked at LG Semicon Company, and worked as a postdoc at MIT. Since joining Samsung Electronics in 2000, he has made significant contributions to the development of the next-generation DRAM/NAND-flash memories and their successful mass production. Since 2020, he has been leading the Device Research Center at Samsung Advanced Institute of Technology, and his current research effort focuses on developing beyond-Si semiconductor devices, Si-/nano-/meta-photonic devices for diverse mobile applications, and quantum computing technologies.

### **Dr. Seongjin Park (POSCO)**



Dr. Seongjin Park received B.S., M.S. and Ph.D. degrees in Mechanical Engineering from POSTECH, Korea. Before joining POSCO, he had been assistant, associate and full professor in the Department of Mechanical Engineering at POSTECH and led the commercialization of POSTECH R&D results by serving as the Head of Office of Industry-Academic Affairs and CEO of POSTECH Holdings. Prior to joining POSTECH, he worked as a Research Professor at Mississippi State University and a Researcher at Pennsylvania State University while working as CTO of start-up, Cetatech. Since 2019, he has been leading POSCO's Industry-Academy-Research Cooperation Office and focusing on discovering POSCO's future new business through the establishment of 'POSCO Venture Platform' based on Open Collaboration with the best partners in the venture ecosystem.